

REPLY AND AMENDMENT

Serial No.: 10/071,512

Filing Date: February 8, 2002

Title: Methods of Light Activated Release of Ligands from Endosomes

Atty. Dkt. No. 0618.004.0002

AMENDMENTS TO THE CLAIMS

Please amend the originally presented claims according to the changes indicated in the following claim listing.

Claims 1-54 (Canceled)

55. (Currently Amended) A method of delivering a double-stranded oligomer into the cytosol of a cell, said method comprising
- a) contacting said cell with said at least one double-stranded oligomer and a fluorophore, wherein said double-stranded oligomer is ~~between~~ about 20-30 nucleotides in length and said double-stranded oligomer and said fluorophore are taken up by said cell; and
 - b) irradiating said cell with radiant energy at a wavelength that activates said fluorophore,
- wherein said irradiating releases said at least one double-stranded oligomer into said cytosol of said cell.
56. (Previously Presented) The method of claim 55, wherein said double-stranded oligomer comprises morpholino oligonucleotides.
57. (Previously Presented) The method of claim 55, wherein said double-stranded oligomer comprises double-stranded RNA.
58. (Previously Presented) The method of claim 57, wherein said fluorophore is selected from the group consisting of a fluorescein, a rhodamine, a cyanine and derivatives thereof.
59. (Previously Presented) The method of claim 58, wherein said fluorophore is a fluorescein.

REPLY AND AMENDMENT

Att'y. Dkt. No. 0618.004.0002

Serial No.: 10/071,512

Filing Date: February 8, 2002

Title: Methods of Light Activated Release of Ligands from Endosomes

60. (Previously Presented) The method of claim 57, wherein said fluorophore and double-stranded oligomer are simultaneously contacted with said cell.
61. (Previously Presented) The method of claim 60, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.
62. (Previously Presented) The method of claim 61, wherein said radiant energy is visible light.
63. (Previously Presented) The method of claim 62, wherein said cell is irradiated for less than about 2 minutes.
64. (Previously Presented) The method of claim 63, wherein said cell is irradiated for less than about 1 minute.
65. (Previously Presented) The method of claim 64, wherein said visible light is produced from a flexible endoscopic light source.
66. (Previously Presented) The method of claim 60, wherein said double-stranded oligomer and fluorophore are covalently linked to each other.
67. (Previously Presented) The method of claim 66, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.
68. (Previously Presented) The method of claim 67, wherein said radiant energy is visible light.
69. (Previously Presented) The method of claim 68, wherein said cell is irradiated for less than about 2 minutes.
70. (Previously Presented) The method of claim 69, wherein said cell is irradiated for less than about 1 minute.
71. (Previously Presented) The method of claim 70, wherein said visible light is produced from a flexible endoscopic light source.

REPLY AND AMENDMENT

Atty. Dkt. No. 0618.004.0002

Serial No.: 10/071,512

Filing Date: February 8, 2002

Title: Methods of Light Activated Release of Ligands from Endosomes

72. (Currently Amended) A method of delivering an oligomer into the cytosol of a cell, said method comprising
- a) contacting said cell with [[said]] at least one oligomer and a fluorescently labeled transport peptide, wherein said at least one oligomer and said fluorescently labeled transport peptide are taken up by said cell; and
 - b) irradiating said cell with radiant energy at a wavelength that activates said fluorescent label,
- wherein said irradiating releases said at least one oligomer into said cytosol of said cell.
73. (Currently Amended) The method of claim 72, wherein said at least one oligomer comprises morpholino oligonucleotides.
74. (Currently Amended) The method of claim 73, wherein said at least one oligomer is double-stranded RNA.
75. (Previously Presented) The method of claim 74, wherein said fluorophore is selected from the group consisting of a fluorescein, a rhodamine, a cyanine and derivatives thereof.
76. (Previously Presented) The method of claim 75, wherein said fluorophore is a fluorescein.
77. (Canceled)
78. (Currently Amended) The method of claim [[77]] 76, wherein said peptide is a poly-arginine peptide.
79. (Previously Presented) The method of claim 76, wherein said peptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:2 and SEQ ID NO:3.
80. (Currently Amended) The method of claim 79, wherein said peptide is [[the]] antennapedia protein.
81. (Currently Amended) The method of claim 79, wherein said peptide is [[the]] transportan protein.

REPLY AND AMENDMENT

Atty. Dkt. No. 0618.004.0002

Serial No.: 10/071,512

Filing Date: February 8, 2002

Title: Methods of Light Activated Release of Ligands from Endosomes

82. (Previously Presented) The method of claim 76, wherein said peptide is VP22.
83. (Currently Amended) The method of claim 72, wherein said fluorescently labeled peptide and said at least one oligomer are simultaneously contacted with said cell.
84. (Previously Presented) The method of claim 83, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.
85. (Previously Presented) The method of claim 84, wherein said radiant energy is visible light.
86. (Previously Presented) The method of claim 85, wherein said cell is irradiated for less than about 2 minutes.
87. (Previously Presented) The method of claim 86, wherein said cell is irradiated for less than about 1 minute.
88. (Previously Presented) The method of claim 87, wherein said visible light is produced from a flexible endoscopic light source.
89. (Currently Amended) The method of claim 83, wherein said at least one oligomer and said fluorescently labeled peptide are covalently linked to each other.
90. (Previously Presented) The method of claim 89, wherein said radiant energy is selected from the group consisting of ultraviolet light, visible light and infrared light.
91. (Previously Presented) The method of claim 90, wherein said radiant energy is visible light.
92. (Previously Presented) The method of claim 91, wherein said cell is irradiated for less than about 2 minutes.
93. (Previously Presented) The method of claim 92, wherein said cell is irradiated for less than about 1 minute.

REPLY AND AMENDMENT

Atty. Dkt. No. 0618.004.0002

Serial No.: 10/071,512

Filing Date: February 8, 2002

Title: Methods of Light Activated Release of Ligands from Endosomes

94. (Previously Presented) The method of claim 93, wherein said visible light is produced from a flexible endoscopic light source.